Control of Annual Grassy Weeds in Lawns  no. 3.101
by Anthony J. Koski

Crabgrass, foxtail, barnyardgrass and goosegrass can be important lawn weed problems at lower elevations (below 6,000 to 6,500 feet) in Colorado. These weeds belong to a group called summer annual grasses. It’s important to understand their growth cycle if you want to control them.

Growth

The seeds of summer annual grasses fall to the ground the previous autumn and germinate the following year, from midspring through midsummer. Germination depends on soil temperature, not air temperature, and generally begins when surface soil temperatures reach 55 to 60 degrees F. Soil temperatures optimal for the germination of crabgrass will closely coincide with the blooming of forsythia shrubs in the local area. Once germinated, these grasses grow quickly during the summer months. Their growth is favored by warm temperatures and a good supply of water. Each annual grass plant produces thousands of seeds from midsummer through the early fall, when the first frost kills them.

There are several approaches to managing annual grasses in the home lawn. They include both cultural (non-herbicidal) and chemical (herbicidal) techniques.

Non-Herbicidal Control

- Mow as high as practical during the summer months for the particular grass species present in your lawn. Mow bluegrass, buffalograss, tall fescue, fine fescue and ryegrass at 2 1/2 to 3 inches during the summer. The seeds of some weeds require high light intensity to germinate. The shaded environment near the soil surface in a high-mown lawn helps deter weed seed germination. In addition, the higher mowing height produces a healthier grass plant. Crabgrass and other annual grassy weeds are much more common and aggressive in lawns that are mowed less than 2 inches.
- Mow often enough so that no more than one-third of the grass blade is removed in a single mowing. Letting grass grow tall and then cutting it back to a low height reduces turf density, allowing weed seeds to germinate and grow more easily. It is especially important to mow a lawn more frequently in the spring, when the grass is growing faster. A lawn may require mowing every three to five days during the spring and early summer.
- Irrigate properly to help reduce annual weed infestation (see fact sheet 7.202, Lawn Care). Light, frequent irrigation encourages weed seed germination, even if a preemergence herbicide has been applied.
- Fertilize according to the needs of your lawn species. See 7.202 for information on proper fertilization of the common lawn grasses.
Core cultivate (aerate) the lawn at least once a year to reduce compaction and to control thatch.

Preemergence Herbicides

Preemergence herbicides control crabgrass by preventing seedling crabgrass from becoming established. To be effective, they must be applied before the crabgrass seed germinates. In southern and western Colorado, crabgrass seed can germinate from late March to early April. Along the northern Front Range, it can germinate from mid-April to mid-May.

Apply preemergence herbicides two to four weeks before the above dates. The actual germination of crabgrass varies from year to year, depending on the weather. Warm, moist springs cause earlier germination and cool, dry springs delay germination. A preemergence herbicide application will not control annual weedy grasses after the seed germinates and the weeds begin to form leaves. Preemergence herbicide applications made just before or at the time of forsythia blooming will provide effective annual grassy weed control.

Apply the herbicide uniformly across the lawn to establish a chemical barrier on the soil surface. Avoid skips and streaks, which may allow weeds to appear in the lawn later in the year. Preemergence herbicides break down during the summer months, most quickly when summers are warm and precipitation or irrigation is plentiful. Therefore, weather or watering that favors a faster than normal breakdown can lead to a lawn infested with a late germinating annual grass. Thus grassy weeds can become a problem in lawns that are not mowed, fertilized or irrigated properly, even when a preemergence herbicide is used.

With normal weather patterns, most preemergence herbicides give good to excellent control of crabgrass, foxtail and barnyardgrass. Control of goosegrass and field sandbur often is less satisfactory, depending on the herbicide used. For best weed control, use the following guidelines. In all cases, read the pesticide label for more detailed information before using the product.

- Do not use preemergence herbicides at the time of seeding except for a product containing siduron. Wait until the new grass is mowed three times before applying a preemergence herbicide.
- After using a preemergence herbicide, wait two to four months before seeding, depending on the product used. Refer to the label for the specific time that must elapse before it is safe to seed.
- Do not apply pre-emergent herbicides to the soil before laying sod or to new sod. Rooting may be restricted by some preemergence herbicides.
- Apply sufficient water (1/2 inch) to wash the herbicide off the grass onto the soil surface within one to two days of application.

Table 1: Preemergence herbicides for annual grass control and expected level of control.

<table>
<thead>
<tr>
<th>Herbicide Name</th>
<th>Trade Name</th>
<th>Crabgrass</th>
<th>Foxtail</th>
<th>Goosegrass</th>
<th>Barnyardgrass</th>
<th>Field Sandbur</th>
</tr>
</thead>
<tbody>
<tr>
<td>benefin</td>
<td>Balan</td>
<td>G-E</td>
<td>F</td>
<td>G</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>benefin/trifluralin</td>
<td>Team</td>
<td>E</td>
<td>G</td>
<td>G-E</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>bensulide</td>
<td>Betasan</td>
<td>G-E</td>
<td>P-F</td>
<td>G-E</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>corn gluten meal</td>
<td>Many</td>
<td>G</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>dithiopyr</td>
<td>Dimension</td>
<td>E</td>
<td>G-E</td>
<td>G-E</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>oxadiazon</td>
<td>Ronstar</td>
<td>G</td>
<td>E</td>
<td>NA</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>pendimethalin</td>
<td>Pre-M, Pendulum</td>
<td>E</td>
<td>E</td>
<td>G-E</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>prodiamine</td>
<td>Barricade</td>
<td>E</td>
<td>G</td>
<td>G</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>siduron</td>
<td>Tupersan</td>
<td>F-G</td>
<td>P-F</td>
<td>F-G</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

E=excellent, G=good, F=fair, P=poor, NA=information not available.

Exclusion of chemicals or product trade names does not imply criticism, nor does inclusion imply any endorsement, by Colorado State University or the author. Read all label directions before using any pesticide.
• Do not thatch the lawn after the preemergence herbicide application, as the herbicide barrier can be disturbed.
• Conventional core cultivation (aeration) does not reduce the effectiveness of pre-emergent herbicides that have already been applied.

Postemergence Herbicides
There are postemergence herbicides (applied AFTER the weeds have begun growing in the lawn) that can be used to control existing annual grasses.

One type that is easily obtained by homeowners from any garden center is called MSMA (monosodium methanearsonate). This product is often sold under the simple trades name “Crabgrass Killer.” This material is most effective against young seedling weeds and can be applied only as a spray. Once the weeds become larger and more mature, MSMA is largely ineffective.

Other herbicides used for postemergence control of crabgrass and other annual grasses include quinclorac (sold under the trade name “Drive”) and fenoxaprop ethyl (trade name “Acclaim Extra”). Both of these herbicides can provide excellent control of seedling annual grasses, and fair to good control of more mature (larger) weeds. Due to their higher product cost they have traditionally been used only by professional lawn care operators. However, quinclorac/Drive is now available to homeowners in a product sold by Ortho under the trade name Weed B Gon MAX® Plus Crabgrass Control Ready-to-Use. This ready-to-use (no mixing required) spray herbicide also contains 2,4-D, MCPP and dicamba, which provide control of broadleaf weeds like dandelion and clover.

The fenoxaprop-p-ethyl product is sold by Bayer Advanced under the name Bermudagrass Control for Lawns. This product will also control crabgrass, foxtail, barnyardgrass and field sandbur in cool-season (bluegrass, fescue, ryegrass) lawns. It should NOT be used on buffalograss, bermudagrass or zoysiagrass lawns.

Some points to consider when using MSMA (sometimes called MAMA or DSMA on the herbicide label) and other postemergence herbicides for annual grassy weed control include:

• These products may cause a temporary discoloration of the turf. If the soil is dry, apply enough water the day before the treatment to moisten the soil to a 3-inch depth. During hot, dry weather apply another 1/2 inch of water two days after the lawn has been sprayed.
• Do not apply postemergence crabgrass herbicides to a new seeding until it has been mowed at least three times.
• Follow ALL label instructions carefully in order to obtain greatest effectiveness and to avoid unintentional injury to the lawn and surrounding landscape plants.
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